

## Complete Summary

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### GUIDELINE TITLE

Assessment and management of venous leg ulcers.

### BIBLIOGRAPHIC SOURCE(S)

Registered Nurses Association of Ontario (RNAO). Assessment and management of venous leg ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2004 Mar. 112 p. [64 references]

### GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT

SCOPE  
 METHODOLOGY - including Rating Scheme and Cost Analysis  
 RECOMMENDATIONS  
 EVIDENCE SUPPORTING THE RECOMMENDATIONS  
 BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
 CONTRAINDICATIONS  
 QUALIFYING STATEMENTS  
 IMPLEMENTATION OF THE GUIDELINE  
 INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
 CATEGORIES  
 IDENTIFYING INFORMATION AND AVAILABILITY  
 DISCLAIMER

## SCOPE

### DISEASE/CONDITION(S)

Venous leg ulcers

### GUIDELINE CATEGORY

Evaluation  
 Management  
 Treatment

### CLINICAL SPECIALTY

Dermatology  
 Family Practice

Internal Medicine  
Nursing

## INTENDED USERS

Advanced Practice Nurses  
Nurses

## GUIDELINE OBJECTIVE(S)

- To improve outcomes for venous leg ulcer clients
- To assist practitioners to apply the best research evidence to clinical decisions
- To promote the responsible use of healthcare resources

## TARGET POPULATION

Adults with venous leg ulcers

## INTERVENTIONS AND PRACTICES CONSIDERED

### Evaluation

1. Clinical history and physical examination including blood pressure measurement, weight, urinalysis, blood glucose level, and Doppler measurement of ankle brachial pressure index (ABPI)
2. Examination of both legs and recording of any venous or arterial disease
3. Measurement of ulcer surface area
4. Quality of life assessment
5. Assessment of functional, cognitive, and emotional state of client
6. Pain assessment and management

### Management

1. Wound cleansing and dressing
2. Referral to a dermatologist for patch testing, where applicable
3. Venous surgery followed by graduated compression hosiery
4. Biological wound coverings and growth factor treatments
5. Reassessment at three-month intervals and then, with resolving and healing ulcers, at six-month intervals
6. Secondary prevention including compression stockings, regular assessment of ABPI, discouragement of self-treatment with over-the-counter preparations, and avoidance of accidents or trauma to legs
7. Patient and family education

### Treatment

1. Debridement, wound cleansing, and systemic antibiotics
2. Graduated compression bandaging combined with exercise
3. Electrical stimulation
4. Hyperbaric oxygen
5. Therapeutic ultrasound

## MAJOR OUTCOMES CONSIDERED

- Healing rates
- Quality of life

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases  
Searches of Unpublished Data

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

An initial database search for existing guidelines was conducted in early 2001 by a company that specializes in searches of the literature for health related organizations, researchers, and consultants. A subsequent search of the MEDLINE, CINAHL, and Embase databases for articles published from January 1, 1998, to February 28, 2001, was conducted using the following search terms and keywords: "leg ulcer," "leg ulcers," "venous leg ulcer(s)," "practice guidelines," "practice guideline," "clinical practice guideline," "clinical practice guidelines," "standards," "consensus statement(s)," "consensus," "evidence based guidelines," and "best practice guidelines." In addition, a search of the Cochrane Library database for systematic reviews was conducted using the above search terms.

A metacrawler search engine ([www.metacrawler.com](http://www.metacrawler.com)), plus other available information provided by the project team, was used to create a list of 42 Web sites known for publishing or storing clinical practice guidelines.

Panel members were asked to review personal archives to identify guidelines not previously found through the above search strategy. In a rare instance, a guideline was identified by panel members and not found through the database or internet search. These were guidelines that were developed by local groups and had not been published to date.

The search method described above revealed eleven guidelines, several systematic reviews, and numerous articles related to venous leg ulcer assessment and management. The final step in determining whether the clinical practice guideline would be critically appraised was to apply the following criteria:

- Guideline was in English.
- Guideline was dated no earlier than 1998, as significant changes in venous leg ulcer management occurred in that year.
- Guideline was strictly about the topic area.
- Guideline was evidence-based (e.g., contained references, description of evidence, sources of evidence).
- Guideline was available and accessible for retrieval.

### NUMBER OF SOURCE DOCUMENTS

The guideline development panel, following the appraisal process, identified eight guidelines, and related updates, to adapt and modify recommendations.

## METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

## RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Level of Evidence

Level A: Evidence obtained from at least one randomized controlled trial or meta-analysis of randomized controlled trials

Level B: Evidence from well designed clinical studies but no randomized controlled trials

Level C: Evidence from expert committee reports or opinion and/or clinical experience or respected authorities. Indicates absence of directly applicable studies of good quality

## METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses  
Systematic Review

## DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

## METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

## DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

In February of 2001, a panel of nurses with expertise in the practice and research related to venous leg ulcers, from community and academic settings, was convened under the auspices of the Registered Nurses Association of Ontario (RNAO). At the onset the panel discussed and came to consensus on the scope of the best practice guideline.

A critique of systematic review articles and pertinent literature was conducted to update the existing guidelines. Through a process of evidence gathering, synthesis, and consensus, a draft set of recommendations was established.

## RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

Clinical Validation-Pilot Testing  
External Peer Review  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This draft document was submitted to a set of external stakeholders for review and feedback. Stakeholders represented various healthcare professional groups, clients and families, as well as professional associations. External stakeholders were provided with specific questions for comment, as well as the opportunity to give overall feedback and general impressions. The results were compiled and reviewed by the development panel – discussion and consensus resulted in minor revisions to the draft document prior to pilot testing.

A pilot implementation practice setting was identified through a "Request for Proposal" (RFP) process. Practice settings in Ontario were asked to submit a proposal if they were interested in pilot testing the recommendations of the guideline. These proposals were then subjected to a review process, from which a successful practice setting was identified. A nine-month pilot implementation was undertaken to test and evaluate the recommendations. The evaluation took place in a chronic care hospital and community care organization in Southern Ontario. The development panel reconvened after the pilot implementation in order to review the experiences of the pilot site, consider the evaluation results, and review any new literature published since the initial development phase. All these sources of information were used to update/revise the document prior to publication.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

The levels of evidence supporting each recommendation (Level A-C) are defined at the end of the "Major Recommendations" field.

#### Practice Recommendations

##### A. Assessment

###### Recommendation 1

Assessment and clinical investigations should be undertaken by healthcare professional(s) trained and experienced in leg ulcer management. (Level of Evidence = C)

#### Recommendation 2

A comprehensive clinical history and physical examination including blood pressure measurement, weight, urinalysis, blood glucose level, and Doppler measurement of Ankle Brachial Pressure Index (ABPI) should be recorded for a client presenting with either their first or recurrent leg ulcer and should be ongoing thereafter. (Level of Evidence = C)

#### Recommendation 3

Information relating to ulcer history should be documented in a structured format. (Level of Evidence = C)

#### Recommendation 4

Examine both legs and record the presence/absence of the following to aid in the assessment of underlying etiology. (Level of Evidence = C)

##### Venous Disease:

- usually shallow moist ulcers
- situated on the gaiter area of the leg
- edema
- eczema
- ankle flare
- lipodermatosclerosis
- varicose veins
- hyperpigmentation
- atrophie blanche

##### Arterial Disease:

- ulcers with a "punched out" appearance
- base of wound poorly perfused, pale, dry
- cold legs/feet (in a warm environment)
- shiny, taut skin
- dependent rubor
- pale or blue feet
- gangrenous toes

#### Recommendation 5

Measure the surface areas of ulcers at regular intervals to monitor progress. Maximum length and width or tracings onto a transparency are useful methods. (Level of Evidence = B)

#### Recommendation 6

The client's estimate of the quality of life should be included in the initial discussion of the treatment plan, throughout the course of treatment, and when the ulcer has healed. (Level of Evidence = C)

#### Recommendation 7

Assess the functional, cognitive, and emotional status of the client and family to manage self-care. (Level of Evidence = C)

#### Recommendation 8

Regular ulcer assessment is essential to monitor treatment effectiveness and healing goals. (Level of Evidence = C)

### B. Diagnostic Evaluation

#### Recommendation 9

Venous disease of the leg is most commonly detected by a combination of clinical examination and measurement of a reliably taken ABPI. (Level of Evidence = A)

#### Recommendation 10

Doppler ultrasound measurement of ABPI should be done by practitioners trained to undertake this measure. (Level of Evidence = B)

#### Recommendation 11

If there are no signs of chronic venous insufficiency and the ABPI is abnormal (greater than 1.2 or less than 0.8), arterial etiology should be assumed and a vascular opinion sought. (Level of Evidence = C)

#### Recommendation 12

Vascular assessment, such as ABPI is recommended for ulcers in lower extremities, prior to debridement, to rule out vascular compromise. (Level of Evidence = C)

### C. Pain

#### Recommendation 13

Assess pain. (Level of Evidence = C)

#### Recommendation 14

Pain may be a feature of both venous and arterial disease and should be addressed. (Level of Evidence = B)

#### Recommendation 15

Prevent or manage pain associated with debridement. Consult with a physician and pharmacist as needed. (Level of Evidence = C)

#### D. Venous Ulcer Care

#### Recommendation 16

Choose the technique of debridement, considering the type, quantity, and location of nonviable tissue, the depth of the wound, the amount of wound fluid, and the general condition and goals of the client. (Level of Evidence = C)

#### Recommendation 17

Cleansing of the ulcer should be kept simple; warm tap water or saline is usually sufficient. (Level of Evidence = C)

#### Recommendation 18

Dressings must be simple, low adherent, and acceptable to the client and should be low cost. (Level of Evidence = A)

#### Recommendation 19

Avoid products that commonly cause skin sensitivity, such as those containing lanolin, phenol alcohol, or topical antibiotics. (Level of Evidence = C)

#### Recommendation 20

Choose a type of dressing depending on the amount of exudate and the phase of healing. (Level of Evidence = C)

#### Recommendation 21

No specific dressing has been demonstrated to encourage ulcer healing. (Level of Evidence = A)

#### Recommendation 22

In contrast to drying out, moist wound conditions allow optimal cell migration, proliferation, differentiation, and neovascularization. (Level of Evidence = A)

#### Recommendation 23

Refer clients with suspected sensitivity reactions to a dermatologist for patch testing. Following patch testing, identified allergens must be avoided, and medical advice on treatment should be sought. (Level of Evidence = B)



#### Recommendation 24

Venous surgery followed by graduated compression hosiery is an option for consideration in clients with superficial venous insufficiency. (Level of Evidence = C)

#### Recommendation 25

Biological wound coverings and growth factor treatments should not be applied in cases of wound infection. (Level of Evidence = C)

#### Recommendation 26

Optimal nutrition facilitates wound healing, maintains immune competence, and decreases the risk of infection. (Level of Evidence = B)

### E. Infection

#### Recommendation 27

Assess for infection. (Level of Evidence = A)

#### Recommendation 28

An infection is indicated when  $>10^5$  bacteria/gram tissue is present. (Level of Evidence = B)

#### Recommendation 29

The treatment of infection is managed by debridement, wound cleansing, and systemic antibiotics. (Level of Evidence = A)

#### Recommendation 30

Antibiotics should only be considered if the ulcer is clinically cellulitic (presence of some of the following signs and symptoms: pyrexia; increasing pain; increasing erythema of surrounding skin; purulent exudate; rapid increase in ulcer size). (Level of Evidence = C)

#### Recommendation 31

Do not use topical antiseptics to reduce bacteria in wound tissue (e.g., povidone iodine, iodophor, sodium hypochlorite, hydrogen peroxide, or acetic acid). (Level of Evidence = B)

#### Recommendation 32

Topical antibiotics and antibacterial agents are frequent sensitizers and should be avoided. (Level of Evidence = B)

## F. Compression

### Recommendation 33

The treatment of choice for clinical venous ulceration uncomplicated by other factors, is graduated compression bandaging, properly applied, and combined with exercise. Graduated compression is the main treatment for venous eczema. (Level of Evidence = A)

### Recommendation 34

High compression increases venous ulcer healing and is more effective than low compression, but should only be used where ABPI  $\geq 0.8$  and ulcer is clinically venous. (Level of Evidence = A)

### Recommendation 35

Compression bandages should only be applied by a suitably trained and experienced practitioner. (Level of Evidence = B)

### Recommendation 36

Venous ulceration should be treated with high compression bandaging to achieve a pressure between 35–40 mm Hg at the ankle, graduating to half at calf in the normally shaped limb, as per La Place's Law. (Level of Evidence = C)

### Recommendation 37

Use protective padding over bony prominences when applying high compression. (Level of Evidence = C)

### Recommendation 38

Arterial insufficiency is a contraindication to the use of high compression. A modified form of compression may be used under specialist supervision. (Level of Evidence = C)

### Recommendation 39

Use compression with caution in clients with diabetes, those with connective tissue disease, and the elderly. (Level of Evidence = C)

### Recommendation 40

Compression therapy should be modified until clinical infection is treated. (Level of Evidence = C)

### Recommendation 41

Bandages should be applied according to manufacturer's recommendations. (Level of Evidence = C)

#### Recommendation 42

When using elastic systems such as "high compression" bandages, the ankle circumference must be more than or padded to equal 18 cm. (Level of Evidence = C)

#### Recommendation 43

Ankle circumference should be measured at a distance of 2.5 cm (one inch) above the medial malleolus. (Level of Evidence = C)

#### Recommendation 44

The concepts, practice, and hazards of graduated compression should be fully understood by those prescribing and fitting compression stockings. (Level of Evidence = A)

#### Recommendation 45

Graduated compression hosiery should be measured and fitted by a certified fitter. (Level of Evidence = C)

#### Recommendation 46

To maintain a therapeutic level of compression, stockings should be cared for as per manufacturer's instructions and replaced every six months. (Level of Evidence = C)

#### Recommendation 47

Graduated compression hosiery should be prescribed for life. (Level of Evidence = B)

#### Recommendation 48

External compression applied using various forms of pneumatic compression pumps is indicated for individuals with chronic venous insufficiency. (Level of Evidence = A)

#### Recommendation 49

The client should be prescribed regular vascular exercise by means of intensive controlled walking and exercises to improve the function of the upper ankle joint and calf muscle pump. (Level of Evidence = A)

### G. Complementary Therapies

#### Recommendation 50

Consider electrical stimulation in the treatment of venous leg ulcers. (Level of Evidence = B)

#### Recommendation 51

Hyperbaric oxygen may reduce ulcer size in nondiabetic, nonatherosclerotic leg ulcers. (Level of Evidence = A)

#### Recommendation 52

Therapeutic ultrasound may be used to reduce the size of chronic venous ulcers. (Level of Evidence = A)

### H. Reassessment

#### Recommendation 53

With no evidence of healing, a comprehensive assessment should be carried out at three-month intervals, or sooner if clinical condition deteriorates. (Level of Evidence = C)

#### Recommendation 54

For resolving and healing venous leg ulcers, routine assessment at six-month intervals should include physical assessment, ABPI, replacement of compression stockings, and reinforcement of teaching. (Level of Evidence = C)

### I. Secondary Prevention

#### Recommendation 55

Measures to prevent recurrence of a venous leg ulcer include wearing compression stockings, regular follow-up to monitor ABPI, discouragement of self-treatment with over-the-counter preparations, and avoidance of accidents or trauma to legs. (Level of Evidence = C)

#### Recommendation 56

Inform the client after the ulcer has healed regarding wearing and maintenance of compression stockings, elevation of affected limb above level of heart when at rest, early referral at first sign of skin breakdown or trauma to limb, need for exercise and ankle-joint mobility, appropriate skin care, avoidance of products likely to be sensitizers, and life-long use of compression. (Level of Evidence = C)

### Education Recommendations

#### Recommendation 57

Guidelines are more likely to be effective if they take into account local circumstances and are disseminated by an ongoing education and training program. (Level of Evidence = C)

#### Recommendation 58

Develop educational programs that target appropriate healthcare providers, clients, family members, and caregivers. Develop programs that maximize retention, ensure carryover into practice, and support lifestyle changes. Present information at an appropriate level for the target audience using principles of adult learning. (Level of Evidence = C)

#### Recommendation 59

Design, develop, and implement educational programs that reflect a continuum of care. The program should begin with a structured, comprehensive, and organized approach to prevention and should culminate in effective treatment protocols that promote healing as well as prevent recurrence. (Level of Evidence = C)

#### Recommendation 60

All healthcare professionals should be trained in leg ulcer assessment and management. (Level of Evidence = C)

#### Recommendation 61 (Level of Evidence = C)

Education programs for healthcare professionals should include:

- Pathophysiology of leg ulceration
- Leg ulcer assessment
- Need for Doppler ultrasound to measure ABPI
- Normal and abnormal wound healing
- Compression therapy theory, management, and application
- Dressing selection
- Principles of debridement
- Principles of cleansing and infection control
- Skin care of the lower leg
- Periwound skin care and management
- Psychological impact of venous stasis disease
- Quality of life
- Pain management
- Teaching and support for care provider
- Health education
- Preventing recurrence
- Principles of nutritional support with regard to tissue integrity
- Mechanisms for accurate documentation and monitoring of pertinent data, including treatment interventions and healing progress
- Criteria for referral for specialized assessment

## Recommendation 62

Healthcare professionals with recognized training in leg ulcer care should cascade their knowledge and skills to local healthcare teams. (Level of Evidence = C)

## Recommendation 63

The knowledge and understanding of the healthcare professional is a major factor in adherence to treatment regimens. (Level of Evidence = C)

## Organization and Policy Recommendations

### Recommendation 64 (Level of Evidence = C)

Successful implementation of a venous ulcer treatment policy/strategy requires:

- Dedicated funding
- Integration of healthcare services
- Support from all levels of government
- Management support
- Human resources
- Financial resources
- Functional space
- Commitment
- Collection of baseline information about vulnerable populations
- Resources and existing knowledge
- Interpretation of above data and identification of organizational problems

### Recommendation 65 (Level of Evidence = C)

Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as appropriate facilitation. Organizations may wish to develop a plan for implementation that includes:

- An assessment of organizational readiness and barriers to education
- Involvement of all members (whether in a direct or indirect supportive function) who will contribute to the implementation process
- Dedication of a qualified individual to provide the support needed for the education and implementation process
- Ongoing opportunities for discussion and education to reinforce the importance of best practices
- Opportunities for reflection on personal and organizational experience in implementing guidelines

Refer to the "Description of the Implementation Strategy" field for more information.

## Definitions:

Level A: Evidence obtained from at least one randomized controlled trial or meta-analysis of randomized controlled trials

Level B: Evidence from well designed clinical studies but no randomized controlled trials

Level C: Evidence from expert committee reports or opinion and/or clinical experience or respected authorities. Indicates absence of directly applicable studies of good quality

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is provided for each recommendation (see "Major Recommendations").

### BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

In leg ulcer care, using treatments with known efficacy leads to improvements in both healing rates and quality of life for the leg ulcer sufferer.

#### POTENTIAL HARMS

Not stated

### CONTRAINDICATIONS

#### CONTRAINDICATIONS

Arterial insufficiency is a contraindication to the use of high compression.

### QUALIFYING STATEMENTS

#### QUALIFYING STATEMENTS

- While best practice guidelines represent a statement of best practice based on the best available evidence, they are not intended to be applied in a "cookbook fashion" and replace the nurse's judgment for the individual client. This document needs to be reviewed and applied, based on the specific needs of the organization or practice setting/environment, as well as the needs and wishes of the client.

- These best practice guidelines are related only to nursing practice and not intended to take into account fiscal efficiencies. These guidelines are not binding for nurses, and their use should be flexible to accommodate client/family wishes and local circumstances. They neither constitute a liability nor a discharge from liability. While every effort has been made to ensure the accuracy of the contents at the time of publication, neither the authors nor Registered Nurses Association of Ontario (RNAO) give any guarantee as to the accuracy of the information contained in them, nor accept any liability, with respect to loss, damage, injury, or expense arising from any such errors or omissions in the contents of this work. Any reference throughout the document to specific pharmaceutical products as examples does not imply endorsement of any of these products.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

Best practice guidelines can only be successfully implemented if there are adequate planning, resources, organizational and administrative support, as well as appropriate facilitation. Registered Nurses Association of Ontario (RNAO), through a panel of nurses, researchers, and administrators has developed a Toolkit: Implementation of Clinical Practice Guidelines based on available evidence, theoretical perspectives and consensus. The Toolkit is recommended for guiding the implementation of any clinical practice guideline in a healthcare organization.

The "Toolkit" provides step-by-step directions to individuals and groups involved in planning, coordinating, and facilitating guideline implementation. Specifically, the Toolkit addresses the following key steps:

Identifying a well-developed, evidence-based clinical practice guideline

1. Identification, assessment and engagement of stakeholders
2. Assessment of environmental readiness for guideline implementation
3. Identifying and planning evidence-based implementation strategies
4. Planning and implementing evaluation
5. Identifying and securing required resources for implementation

Implementing practice guidelines that result in successful practice changes and positive clinical impact is a complex undertaking. The Toolkit is one key resource for managing this process.

### IMPLEMENTATION TOOLS

Patient Resources  
Tool Kits

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.



## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better  
Living with Illness

### IOM DOMAIN

Effectiveness  
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Registered Nurses Association of Ontario (RNAO). Assessment and management of venous leg ulcers. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2004 Mar. 112 p. [64 references]

### ADAPTATION

The panel, following the appraisal process, identified the following guidelines, and related updates, to adapt and modify recommendations:

- Clement, D. L. (1999). Venous ulcer reappraisal: Insights from an international task force. *Journal of Vascular Research*; 36(Suppl.1): 42-47.
- Clinical Resource Efficiency Support Team (CREST) (1998a). Guidelines for the assessment and management of leg ulceration. CREST, Belfast, Northern Ireland [On-line]. Electronic copies: Available from [www.crestni.org.uk/publications/leg\\_ulceration.pdf](http://www.crestni.org.uk/publications/leg_ulceration.pdf)
- Compliance Network Physicians/Health Force Initiative, Inc. (1999). Guideline for the outpatient treatment – venous and venous-arterial mixed leg ulcer. Compliance Network Physicians/Health Force Initiative, Inc., Berlin, Germany [On-line]. Electronic copies: Available from [www.cnhfi.de/index-engl.html](http://www.cnhfi.de/index-engl.html).
- Kunitomo, B., Cooling, M., Gulliver, W., Houghton, P., Orsted, H., & Sibbald, R. G. (2001). Best practices for the prevention and treatment of venous leg ulcers. *Ostomy/Wound Management*; 47(2): 34-50.
- New Zealand Guidelines Group (NZGG) (1999). Care of people with chronic leg ulcers: An evidence based guideline. New Zealand Guidelines Group [On-line]. Electronic copies: Available from [www.nzgg.org.nz](http://www.nzgg.org.nz).
- Ottawa-Carleton Community Care Access Centre Leg Ulcer Care Protocol Task Force (2000). Ottawa-Carleton Community Care Access Centre (CCAC) venous leg ulcer care protocol: Development, methods, and clinical recommendations. Ottawa, Ontario: Ottawa-Carleton CCAC Leg Ulcer Protocol Task Force.
- Royal College of Nursing (RCN) (1998). Clinical practice guideline: The management of patients with venous leg ulcers. RCN Institute, Centre for Evidence-Based Nursing, University of York and the School of Nursing,

- Midwifery and Health Visiting, University of Manchester [On-line]. Electronic copies: Available from [www.rcn.org.uk](http://www.rcn.org.uk).
- Scottish Intercollegiate Guidelines Network (SIGN) (1998). The care of patients with chronic leg ulcers: A national clinical guideline. Scottish Intercollegiate Guidelines Network [On-line]. Electronic copies: Available from [www.sign.ac.uk/pdf/sign26.pdf](http://www.sign.ac.uk/pdf/sign26.pdf)

#### DATE RELEASED

2004 Mar

#### GUIDELINE DEVELOPER(S)

Registered Nurses Association of Ontario - Professional Association

#### SOURCE(S) OF FUNDING

Funding was provided by the Ontario Ministry of Health and Long Term Care.

#### GUIDELINE COMMITTEE

Not stated

#### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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#### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

## GUIDELINE STATUS

This is the current release of the guideline.

## GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Registered Nurses Association of Ontario \(RNAO\) Web site](#).

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines Project, 158 Pearl Street, Toronto, Ontario M5H 1L3.

## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Toolkit: implementation of clinical practice guidelines. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Mar. 88 p.

Electronic copies: Available in Portable Document Format (PDF) from the [Registered Nurses Association of Ontario \(RNAO\) Web site](#).

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines Project, 158 Pearl Street, Toronto, Ontario M5H 1L3.

## PATIENT RESOURCES

The following is available:

- Health education fact sheet. Taking care of your legs. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2004 Mar. 2 p.

Electronic copies: Available in Portable Document Format (PDF) from the [Registered Nurses Association of Ontario \(RNAO\) Web site](#).

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines Project, 158 Pearl Street, Toronto, Ontario M5H 1L3.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## NGC STATUS

This NGC summary was completed by ECRI on September 16, 2004. The information was verified by the guideline developer on October 14, 2004.

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